PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of: Flecknoe-Brown et al. **Application No.:** 10/580,524 **Confirmation No.:** 4216 **Filed:** May 24, 2006 For: CONTROL OF OXYGENATION Group: 1794 Examiner: Anthony J. Weier	Our File: MOR3-PT022 Date: September 8, 2009

SECOND DECLARATION OF ANTHONY EARL FLECKNOE-BROWN PURSUANT TO 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I, Anthony Earl Flecknoe-Brown, declare that:

1. I am a named co-inventor inventor of the subject matter described and claimed in the above-identified patent application.

2. I have been in the business of designing, manufacturing, and marketing various thermoplastic forming processes, thermoplastic products, containers, liners, and drains for over twenty -five years.

3. I have developed inventions covered in the following U.S. patents:

6,123,222 Package and system for dispensing preformed nurser sac;
5,806,711 Nurser liner;
5,617,972 Nurser liner;
4,994,229 Forming thermoplastic web materials;
4,722,820 Molten theromplastic web feeding process;
4,639,165 Drainage tube;
4,543,054 Thermoforming machine;
4,480,979 Stretch forming hollow articles; and
4,288,401 Thermoplastic forming process.

4. In view of my experience over at least the last twenty-five years, I would be considered to be a person of at least ordinary skill in this art.

5. I studied the April 8, 2009 Final Office Action ("Final Action"), including the 35 U.S.C. §103 rejections of claims 22 and 40-42 as obvious over DE 2357970 (White); claims 24 and 26 as obvious over White in view of U.S. 2004 0226451 (Diaz); and claim 27 as obvious over Diaz in view of French Publication No. 2 736 923.

6. I reviewed the June 5, 2009 Reply to the Final Action ("Reply"), and studied the June 17, 2009 Advisory Action ("Advisory Action") issued in response thereto.

7. I studied White, Diaz, and French Publication No. 2 736 923 and the Examiner's reasons for rejecting the claims as obvious over these references, as well as AU 62813/73 ("Australian Specification"), which claims priority to the same document as White.

8. Independent claim 22 of the above-identified patent application recites:

> A method of maturing wine in bulk after fermentation comprising,
> storing the wine in a closed container over a period ranging from four to thirty-six months after fermentation of the wine,
> wherein the container has walls that comprise polyethylene and are sufficiently stiff so as to render the container self supporting, and
> the walls comprise a combination of thickness, surface area and volume to permit oxygen to permeate the walls directly from the atmosphere into the wine in contact with the walls at a rate less than 80 milligram of oxygen per litre of wine per year and the combination of thickness, surface area, and volume provides the container with an oxygen permeation rate that results in wine maturation equivalent to oak cask maturation.

Underline emphasis added.

9. Independent claim 42 of the above-identified patent application recites:

> A method of maturing a beverage other than table wine in bulk after fermentation of the beverage, comprising:
> storing the beverage in a closed container having walls over a period ranging from 4 to 36 months after fermentation of the beverage, with the walls being sufficiently stiff so as to render the container self supporting,
> wherein the walls are exposed to the atmosphere so as to allow atmospheric oxygen to permeate through the walls, and
> the walls comprise polyethylene and a combination of area and thickness that permit controlled maturation of the beverage by controlling oxygen permeation through the walls to a rate of less than 80 milligrams of oxygen per litre of wine throughout the period and the combination of area and thickness provides the container with an oxygen permeation rate that results in maturation equivalent to oak cask maturation.

Underline emphasis added.

10. Each of the claim rejections in the Action relies on the teachings of White. In rejecting claims 22 and 40-42 as obvious over White, the Action states:

> DE 2357970 discloses a process wherein wine is matured in a closed container made of plastic (e.g. polyethylene) wherein oxygen is allowed to permeate the walls of said container to facilitate maturing of the wine. DE 2357970 also discloses fermentation of other beverages including fruit juices from, for example, grapefruit.

11. White's disclosure is directed to an expedited process of producing an alcoholic beverage by fermentation of juices. See Australian Specification at page 2.

12. Contrary to the Action's assertions, a person of ordinary skill in the art would not regard White as teaching "a process wherein wine is matured."

13. Although White initially references wines having "mature" characteristics, a person of ordinary skill in the art would recognize that the word "mature" is not used in the technical sense. The fact that the term appears in quotation marks, along with the fact that the disclosure repeatedly discusses a shortened process of "fermentation," would indicate to a person of ordinary skill in the art that the process is directed to a shortened process that actually omits any actual maturation period, yet imparts the wine with some similar qualities to those that have undergone maturation.

14. A person of ordinary skill in the art would recognize that White's process produces an inferior quality wine to that of the pending claims, and would not look to this reference in developing "a method of maturing" wine or any other beverage.

15. A person of ordinary skill in the art would be deterred from looking to White to develop a process including the step of storing the wine or beverage "over a period ranging from four to thirty six months," particularly in view of the fact that the only reference to a time period in White's disclosure states that fermentation takes place in "about 5 to 21 days."

16. A person of ordinary skill in the art would be further deterred from looking to White to develop a method "that results in wine maturation equivalent to oak cask maturation," because the permeation rate of White's vessel would be far too high to achieve such a result, and the disclosure is aimed to speeding up the fermentation process. In contrast, as a person of ordinary skill in the art would recognize, maturation equivalent to that which takes place in oak casks must take place slowly with a high degree of control over oxygen entering the container.

17. A person of ordinary skill in the art would understand that a clear distinction exists between fermentation, as taught by White, and maturation, as recited in the pending claims.

18. The Reply explains:

> It is generally understood by those skilled in the art that maturation of red wine only proceeds after the secondary (malo-lactic) fermentation (MLF) is completed. The reason for this is that red wine cannot have SO_2, the usual wine preservative, added until MLF is completed because free SO_2 suppresses that MLF.
>
> Maturation involves REDOX reactions that occur slowly and with extremely limited oxygen supply, in the presence of SO_2. Fermentation involves the reproduction and metabolic activity of

> yeast, an aerobic organism requiring a plentiful supply of oxygen. The rate of oxygen entry required to sustain a ferment is thousands of times greater than the desired rate for maturation.

Page 9. Emphasis in original.

19. The Reply's characterization of maturation and fermentation is correct, and these facts would be known to a person of ordinary skill in the art.

20. Were the maturation process of the pending claims to be carried out with an oxygen entry rate suitable for a fermentation process, such as that disclosed by White, the resulting wine would quickly become tainted and undrinkable.

21. In response to the arguments submitted in the Reply, the Advisory Action states "[i]t should be noted that Applicant argues that the instant invention employs a maturation alone after fermentation has been completed; however, this limitation does not appear to be recited in the instant claims." Page 2.

22. Although a person of ordinary skill in the art would recognize a distinction between "maturation" and "fermentation," the claims have been amended to recite that the claimed maturation occurs "after fermentation."

23. These amendments further distinguish the claims over White's disclosure, which is directed to a fermentation process.

24. These amendments are also fully supported by the originally filed specification, as it would be readily apparent to a person of ordinary skill in the art that the disclosure is directed to wine maturation in the ordinary sense of the term,

which occurs after fermentation, unlike White's "maturation" which actually refers to fermentation.

25. White also fails to teach a method carried out in a container having walls "sufficiently stiff so as to render the container self supporting," as recited in independent claims 22 and 42, and this feature would not have been an obvious modification to White's disclosure.

26. White discloses the use of "a vessel made of a film or membrane of material." This is out of necessity, because at the time of White's disclosure it was believed that vessels with walls thick and stiff enough to be self supporting would be too thick to permit adequate oxygen transfer to permit fermentation to take place. As such, it would not have been obvious, and nothing in the state of the art at the time the present application was filed would have taught or suggested producing such a self supporting container.

27. As set forth in the Declaration filed February 2, 2009, it was <u>not</u> clear prior to developing the invention whether it would be possible to manufacture a container with polyethylene walls that were sufficiently stiff to render the container self supporting, yet thin enough to allow adequate transmission of oxygen for wine maturation, and only after considerable efforts was it possible to produce a maturation tank that had a suitable permeability and that was also thick enough to be self supporting and "rigid."

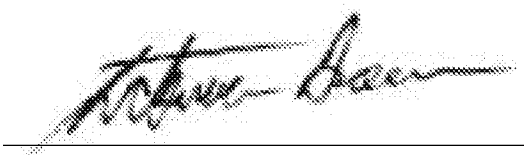
28. The method of the pending claims would not be obvious to a person of ordinary skill in the art based on the cited references, and at the time of the invention it would be unclear whether it would even be possible to produce a "self supporting" container with walls having a "combination of thickness, surface area, and volume to permit oxygen to permeate the walls directly from the atmosphere into the wine in contact with the walls at a rate of less than 80 milligrams of oxygen per litre of wine per year."

29. As set forth above, the claimed invention did not occur due to routine experimentation, but by determination of a novel and non-obvious combination of factors that were fortuitously and unexpectedly discovered.

30. I have been warned that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. § 1001) and may jeopardize the validity of the application or any patent issuing thereon.

31. I declare under penalty of perjury under the law of the Unites States of America that the foregoing is true and correct.

Executed this 2nd day of September 2009 at Yarra Glen, Victoria, Australia.



Anthony Earl Flecknoe-Brown